

Listing of the Claims

A listing of the entire set of pending claims (including amendments to the claims) is submitted herewith per 37 C.F.R. § 1.121. This listing of claims will replace all prior versions and listings of claims in the application.

1. (previously presented) A method for providing bandwidth fairness in wireless networks, comprising:

receiving at least one stream of packets on an access point for at least one wireless station;

determining a bandwidth requirement for transmission of the at least one stream of packets to the at least one wireless station;

defining a ratio between a plurality of streams based on the bandwidth requirement;

based on the ratio, setting a more fragment bit of the at least one stream of packets when there are successive packets in the at least one stream of packets; and

transmitting the successive packets of the at least one stream of packets from the access point to the at least one wireless station without back-off.

2. (previously presented) The method of claim 1, wherein the step of setting the more fragment bit, comprises setting the more fragment bit in a MAC header accompanying the at least one stream of packets to a value of 1.

3. (previously presented) The method of claim 1, wherein the at least one stream of packets comprises a plurality of packets.

4. (previously presented) The method of claim 1, wherein the more fragment bit is not set in a last packet of the at least one stream of packets to be transmitted.

5. (previously presented) The method of claim 1, comprising:

calculating an airtime requirement for transmitting the packet to the at least one wireless station;

setting a time counter on the access point based on the airtime requirement; and

determining whether the packet can be transmitted before the time counter expires.

6. (previously presented) The method of claim 5, further comprising transmitting the packet to the access point.

7. (previously presented) The method of claim 5, further comprising splitting the packet into a set of fragments if the packet cannot be transmitted before the time counter expires.

8. (previously presented) The method of claim 7, further comprising transmitting the set of fragments until the time counter expires.

9. (previously presented) The method of claim 7, wherein the splitting step comprises splitting the packet into equal sub-packets to yield a set of fragments.

10. (previously presented) The method of claim 5, wherein the airtime requirement is calculated based on a size and a transmission rate of the packet.

11. (previously presented) The access point of claim 23, further comprising:
 - means for calculating an airtime requirement for a packet received on the access point for the at least one wireless station;
 - means for setting a time counter based on the airtime requirement;and
 - means for determining whether the packet can be transmitted to the at least one wireless station before the time counter expires.
12. (previously presented) The access point of claim 11, further comprising means for communicating the packet if the packet can be transmitted to the at least one wireless station before the time counter expires.
13. (previously presented) The access point of claim 11, further comprising means for splitting the packet into a set of fragments if the packet cannot be transmitted to the at least one wireless station before the time counter expires.
14. (previously presented) The access point of claim 13, wherein the means for splitting the packet splits the packet into equal sub-packets to yield the set of fragments.
15. (previously presented) The access point of claim 11, wherein the airtime requirement is calculated based on a size and a transmission rate of the packet.
16. (previously presented) The access point of claim 11, wherein the access point is a wireless access point implemented within a wireless local area network.

17. (previously presented) The program product as defined in claim 24, wherein said medium having stored thereon machine readable instructions that, when executed, implement the method for providing airtime and bandwidth fairness in wireless networks, said method comprising:

calculating an airtime requirement for a packet received on the access point for the at least one wireless station;

setting a time counter based on the airtime requirement; and

determining whether the packet can be transmitted to the at least one wireless station before the time counter expires.

18. (previously presented) The program product of claim 17, further comprising program code for communicating the packet if the packet can be transmitted to the at least one wireless station before the time counter expires.

19. (previously presented) The program product of claim 17, further comprising program code for splitting the packet into a set of fragments if the packet cannot be transmitted to the at least one wireless station before the time counter expires.

20. (previously presented) The program product of claim 19, wherein the program code for splitting the packet splits the packet into equal sub-packets to yield the set of fragments.

21. (previously presented) The program product of claim 17, the airtime requirement is calculated based on a size and a transmission rate of the packet.

22. (previously presented) The program product of claim 17, wherein the program product is implemented on the access point that is implemented within a wireless local area network.

23. (previously presented) An access point for providing bandwidth fairness in wireless networks, comprising:

- means for receiving at least one stream of packets for at least one wireless station;
- means for determining a bandwidth requirement for transmission of the at least one stream of packets to the at least one wireless station;
- means for defining a ratio between a plurality of streams based on the bandwidth requirement;
- based on the ratio, means for setting a more fragment bit of the at least one stream of packets when there are successive packets in the at least one stream of packets; and
- means for transmitting the successive packets of the at least one stream of packets from the access point to the at least one wireless station without back-off.

24. (previously presented) A program product stored on a recordable medium, said medium having stored thereon machine readable instructions that, when executed, implement a method for providing bandwidth fairness in wireless networks, said method comprising:

- receiving at least one stream of packets on an access point for at least one wireless station;
- determining a bandwidth requirement for transmission of the at least one stream of packets to the at least one wireless station;
- defining a ratio between a plurality of streams based on the bandwidth requirement;

based on the ratio, setting a more fragment bit of the at least one stream of packets when there are successive packets in the at least one stream of packets; and

transmitting the successive packets of the at least one stream of packets from the access point to the at least one wireless station without back-off.